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Sustainable mountain development*

Report of the Secretary-General

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* The present report was prepared by the Food and Agriculture Organization of the United Nations as task manager for chapter 13 of Agenda 21, with contributions from other United Nations agencies and international organizations. The report is a brief factual overview, which intends to inform the Commission on Sustainable Development on key developments in the subject area.

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Introduction

1. Over the past 10 years, mountains have been the focus of growing attention, largely as a result of the recognition they have received under Agenda 21[1] and efforts to implement chapter 13 thereof, entitled "Managing fragile ecosystems: sustainable mountain development". During this period, significant results have been achieved in terms of greater awareness and understanding of the global importance of mountain ecosystems and the people who inhabit them, and through concerted and sustained action in many mountain regions throughout the world to address human development and environmental concerns. Mountains have gained increasing recognition for their global importance as water towers for an increasing world population; focal points of global biological diversity; special places for high cultural diversity; recreation areas for an increasingly urbanized world; and the most sensitive indicators of global environmental and climatic change.

2. However, overall, the level of economic development in most of the world's mountain regions remains unacceptably low. Abject poverty, isolation, cultural erosion, armed conflict, natural disasters and many other threats and obstacles continue to afflict a large number of those living in these fragile ecosystems, in which living conditions are often harsh and difficult. In more developed regions, inappropriate developments in mining, outdoor recreation, transport infrastructure, and suburbanization and air pollution damage have seriously negatively impacted water, flora, fauna and mountain residents. On the other hand, real opportunities exist to improve livelihoods and environmental conditions, and these need to be more fully exploited. The objectives defined under chapter 13 require more concerted and sustained action in the immediate years ahead for real and lasting progress to be achieved.

3. The present report describes major areas of progress achieved in mountain development and conservation, considers major gaps in, and constraints on, progress, and identifies areas on which greater attention needs to be focused in the future. It is not intended to be a comprehensive overview but covers only selected areas that are considered the most important or illustrative of the chapter 13 experience to date.

4. Efforts to implement chapter 13 since 1992 have been carried out at different levels and through a variety of mechanisms and institutional settings. Many events and activities have occurred at the global and regional levels, but more importantly, there has been an increase in action initiated within mountainous countries and local communities throughout the world. Governments, at national and increasingly at decentralized levels, have become more engaged in mountain issues. Non-governmental organizations have played a leading role in these efforts, ranging from awareness-raising activities to local development initiatives. The growing number of activities in support of the sustainable development of mountain regions, although still largely inadequate, indicates that mountain issues are moving from discussion and debate to concrete action on the ground.

5. Mountain issues fall into several programme areas, all of which have seen various degrees of progress. The major areas include: rural development and food security; conservation of biological diversity; fresh water; forests; tourism; climate change; disaster reduction; culture and traditional knowledge; and research. Progress in all these groups has been reported on in some detail in past reports of the Secretary-General to the Commission on Sustainable Development and will not be described in further detail here.

I. Achievements

6. In assessing progress achieved in the implementation of chapter 13, it is useful to recall the major areas that were originally identified at the United Nations Conference on Environment and Development in 1992 as crucial to achieving sustainable mountain development. These include: (a) supporting the efforts of mountain inhabitants to reverse the trend of degradation; (b) creating global awareness on the importance of mountains and building effective mountain constituencies on all continents; and (c) building networks of national, regional and international institutions dealing with the issue of sustainable mountain development. Ten years later, these areas can serve as an important basis for examining the progress that has been made. Relatively little progress has been made in the first area compared with the latter two, for which some of the main achievements are described below.

A. Creating global awareness

7. Raising awareness and understanding about the role mountains play in the global environment and the importance of the goods and services provided by those who live there is an ongoing process, but one in which significant progress has been made. The decision by Governments to assign chapter status to mountains at the United Nations Conference on Environment and Development was itself an important step in raising the profile and visibility of mountains and the issues surrounding them, to a higher level of public debate. The series of consultations of intergovernmental and non-governmental organizations organized under chapter 13 between 1994 and 1996[2] contributed to enhanced political attention to mountain issues, especially at regional and country levels. The strong mountain constituency and prioritized action agenda which have developed since the United Nations Conference on Environment and Development have led to an unusual degree of coordination of efforts and a high level of agreement and effectiveness.

8. Clearly, the most significant opportunity to increase awareness and understanding on mountains has been brought about by the General Assembly's decision in 1998 to declare 2002 the International Year of Mountains.[3] The observance of the International Year of Mountains during the current implementation period of chapter 13 has given new impetus to mountain initiatives and provided greater opportunities for improvements in policies, financial mechanisms, institutional arrangements and other areas affecting mountains. The report of the Secretary-General (A/55/218) on the status of preparations for the Year was submitted to the Assembly at its fifty-fifth session; the Assembly adopted resolution 55/189 on 20 December 2000, calling for, inter alia, renewed support and contributions to make the Year a success.

9. Many countries have mobilized and launched national programmes for Year observance, especially through the establishment of national committees which often involve close partnership and collaboration among Governments, non-governmental organizations, private sector organizations and others.[4] For further information on the Year, the Food and Agriculture Organization of the United Nations (FAO) has established a web site at *www.mountains2002.org*. The most important practical outcome expected from the observance of the Year is the establishment of long-term national mountain strategies and integrated mountain programmes in many countries throughout the world.

B. Building networks

10. The development of new information and exchange networks dedicated to mountain issues has also contributed very significantly to awareness, understanding and strengthened capacity to implement sustainable mountain development. The Mountain Forum, which was established in 1995, has, more than any other single mechanism, promoted greater awareness of critical mountain issues and fostered mutual support for action at the local level. It has done so by providing a variety of services, including electronic conferences, discussion lists, an online library and documentation centre, membership contact information and an updated calendar of key mountain-related events. The Mountain Forum has also played an important role in supporting the observance of the International Year of Mountains. Other mountain networks, regional and thematic, have also grown during this period and contributed to chapter 13 implementation. Among these include the global network of Mountain Protected Area managers and researchers (from 67 countries), under the aegis of the International Union for Conservation of Nature and Natural Resources-World Conservation Union (IUCN), and the Andean Mountain Association and the African Mountain Association at the regional level.

11. Following the United Nations Conference on Environment and Development, inter-agency collaboration and cooperation under chapter 13 have been particularly strong, in particular through the Inter-agency Group on Mountains. This informal ad hoc group includes participants from both United Nations and other organizations, with FAO serving as the group's coordinator. It has been the main institutional mechanism to advise on the implementation of chapter 13 and has served to forge new and innovative partnerships among non-governmental organizations, intergovernmental organizations and Governments. The group has also played a key role in advising on preparations for the observance of the Year.

C. Gaps and constraints

12. Although notable progress has been made in several areas of chapter 13 implementation, as described above, the number of specific mountain initiatives within countries, and in particular at the local community level, remain insufficient to the task. In terms of establishing and adequately funding field programmes in mountain areas, the overall impact of chapter 13 implementation is likely to fall short of its potential unless a significant and renewed effort is made in addressing:

- **Institutional constraints**, especially at national level, inhibiting the development of comprehensive and integrated approaches to sustainable mountain development. Most development activities in mountain regions continue to be sector-based. Yet, the specific issues and problems affecting mountain areas are often interrelated and complex and require long-term solutions that consider intersectoral linkages and relationships;

- **The lack of mountain-specific information and statistics** to assist planners in better understanding the particular nature of mountain areas. Data collected within individual countries rarely make any distinction between highland and lowland areas: reporting districts commonly contain both. This tends to limit the amount of funding going to mountain areas, since there is little statistical evidence of the fact that mountains are relatively worse off in terms of poverty, food security, income opportunities, infrastructure development and so forth, which would more easily justify higher levels of investment. Even where disaggregated data do exist, they are rarely analysed in terms of the geographical distribution of poverty and vulnerable groups. A related gap is in the development of mountain-specific criteria and indicators, potentially an important tool for monitoring progress and assessing the impact of different processes and influences (population dynamics, resource management, poverty and so forth) on the sustainable development of mountain regions;

- **The level of investment in the sustainable development of mountain areas** which has been inadequate over the past 10 years, in terms both of domestic public spending and of official development assistance (ODA). Funding that has gone to mountain areas has mostly been effected through more traditional approaches that include mountain areas among others in national development initiatives and also tend to approach the problems from a sectoral perspective, as described above. In addition, the problem of inequities between highland and lowland regions persists, with inadequate accounting of the real costs of the goods and services that come from the mountains. There are also growing inequities within mountain regions in both the North and the South owing to increasing urbanization in the mountains. A number of innovative mechanisms to fund mountain conservation and development, such as debt-for-nature swaps and payments for watershed services, have been identified and tested, but have yet to be applied on a widespread basis. Private sector investment in mountain areas, other than for exploitive purposes, has also been extremely limited.

13. Efforts to support mountain inhabitants in reversing the trend of degradation remain the most serious challenge in the implementation of chapter 13, as this would involve translating ideas into concrete actions at national, local and community levels and requires far more commitment in resources than what has been made available. There has been progress in this direction, but the pace and the extent of the actions have been far less than what is needed to meet the challenges effectively and adequately. There are some noteworthy examples such as Mexico which embarked in 1997 on a sustainable mountain programme that involved the participation of all stakeholders, training and capacity-building at all levels, and pilot field activities. China also in 1996 launched a major three-year national demonstration project on integrated mountain development in 114 counties in 30 provinces. There are also ongoing efforts in the Fouta-Djallon region of West Africa for integrated upland development and resources management to protect the water supply which is central for the livelihood of many people in the region. However, there is an urgent need for more action, assistance and cooperation to carry out sustainable mountain development that would bring a meaningful change among mountain people at a community and a household level and this is an area that would require the doubling of everyone's efforts and commitments in the coming decade.

II. Future trends and challenges

A. Economic and livelihood opportunities

14. There is a growing realization, based on practical field experience, that sustainable approaches to mountain development, especially those with a strong focus on conservation objectives, require particular attention to improving economic and livelihood opportunities for mountain dwellers. Most initiatives that address natural resource management and environmental issues without addressing the economic and financial needs of mountain populations have had limited success at best. When, for example, income-generating activities are combined with conservation efforts in upland development projects, there is often a higher degree of interest, motivation and ownership of activities that may otherwise be of little direct interest or perceived benefit to local communities. Greater attention to developing local enterprises and related markets for goods and services in mountain areas are increasingly important elements in comprehensive approaches to sustainable mountain development.

B. Ensuring local participation

15. Another important challenge is to ensure that local perspectives, needs and issues are fairly and effectively included in the planning and formulation of mountain development programmes. The fact that many living in mountain regions are politically disenfranchised, often owing to their remoteness from political centres, indicates that empowerment strategies are required to ensure their involvement and active participation in planning and implementing mountain development programmes. The development of national strategies for mountain areas also requires the inclusion of local perspectives to be effective. It is particularly important to ensure that local population groups enjoy sustainable livelihoods as a means to fulfil their basic needs. A significant number of national mountain strategies and programmes are expected to result from the observance of the International Year of Mountains in 2002.

C. Conflict

16. One of the major obstacles to human development in many mountain regions continues to be conflict and war. Mountain areas are, disproportionately, sites of social conflict, ethnic strife and war, resulting from a combination of very complex issues. These include poverty, ethnic tension, competition for scarce resources, particularly water, and even the geographical isolation of mountain areas, which makes them likely refuges for armed opposition groups. Efforts to carry out conservation and sustainable development initiatives are often stymied by these realities. Conflict resolution will have to be a top priority in the coming years if development and conservation efforts in the world's mountain areas and the ensuring of the basic human rights of mountain populations are to be successful and long-lasting. Trans-border parks for peace offer much promise towards this end.

D. Policy and law

17. So far, few countries have enacted comprehensive national mountain legislation and policies that directly address the special conditions and problems of mountain regions and those who inhabit them. In the coming years, in order to provide enhanced support to ongoing mountain initiatives and foster the development of new ones, new legal and policy frameworks will need to be developed at national and decentralized levels. To be effective, these should, at a minimum, recognize local property rights, apply full-cost pricing for mountain goods and services, offer adequate protection to fragile ecosystems and sacred sites, and protect traditional knowledge through intellectual property rights.

E. Natural hazards and risks

18. In recent years, devastating natural disasters have occurred in many mountain regions throughout the world. Major floods, landslides, avalanches and volcanic eruptions have resulted in significant loss of life and severe hardship, often with serious economic disruptions, especially for poorer countries. Significant challenges lie ahead in terms of increasing knowledge about mountain hazards, and identification and surveillance of at-risk households and communities, and of improving risk management, in particular disaster reduction, and preparedness measures to mitigate the impact of disasters on society.

F. Highland-lowland interactions

19. Mountain areas are open systems, which intensively interact with their surrounding regions. Awareness of the importance and complexity of highland/lowland linkages is significantly increasing. These interactions are multifaceted, involving not only ecological considerations but economic, social and political ones as well. In recent years, important experience has been gained in terms of the ecological dimension of these linkages, but little attention has yet been given to the other aspects. Considerable effort is required to increase the knowledge and experience about these linkages, including looking more closely at such issues as highland-lowland trade, stewardship services by mountain communities and equitable share of benefits from extraction by others. Ultimately, these should lead to more secure rights, and opportunities for mountain dwellers. Better support to watershed management groups at different geographical scales and the formulation of integrated watershed management policies are also needed.

G. Research

20. Generating and strengthening knowledge about the ecology and sustainable development of mountain ecosystems constitute one of the major programme areas for action under chapter 13. Given the high level of complexity in mountains and the interrelatedness of many of the sectors, a better understanding of the various processes and interactions that occur in mountain ecosystems is needed to enhance decision-making regarding resource management and human development concerns. Although greater overall levels of investment in mountain research are needed, opportunities already exist to adapt current research in a variety of sectors to more explicitly address concerns in mountain regions. This could result in significant added value of ongoing research without necessarily requiring large new financial investments.

H. Culture and tradition

21. The great diversity of cultures and traditions is a recognized asset of mountains throughout the world and an important element in shaping the wide variety of mountain landscapes and the goods and services they provide. Preserving cultural identity while supporting economic growth and more modern lifestyles, especially as mountain dwellers come into greater contact with outsiders, presents an important challenge in sustainable mountain development initiatives. Cultural diversity and traditional ways of life also provide opportunities for economic growth, especially through tourism, as they are major reasons for the fact that many people want to visit mountains. However, balanced and prudent approaches are needed in developing the enormous potential offered by tourism in mountain areas to avoid negative impacts in terms of both environment and people.[5]

III. Conclusions

22. Since the United Nations Conference on Environment and Development, significant progress has been made on a number of fronts in the implementation of chapter 13. A balanced approach that addresses both human development needs and environmental concerns has been increasingly applied in many mountain regions of the world, in both the North and the South. There remain important reasons to be concerned about the pace of action and the overall commitment, both political and financial, to sustainable mountain development; but the many areas where effective action has occurred give reason for hope that the continuing challenges to improving livelihoods and environmental conditions in mountains can be met. In particular, the strong and dedicated mountain constituency that has grown through very innovative and collaborative mechanisms has brought together people and institutions from a wide variety of sectors to confront the many issues facing mountain areas. Supporting and reinforcing such collaboration are required to ensure further and sustained actions and commitments.

Notes

[1] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

[2] The most notable include regional intergovernmental consultations, which took place in Asia (1994), Latin America (1995), Europe (1996) and Africa (1996). Additionally, non-governmental organization consultations occurred at the global level (Lima, Peru, 1994) and regionally (Europe, 1996).

[3] See General Assembly resolution 53/24 of 10 November 1998. This effort was initiated by Kyrgyzstan in 1996.

[4] In response to a questionnaire sent to 180 countries by the Director-General of the Food and Agriculture Organization of the United Nations (FAO), as lead agency for the Year, many Governments have provided important information about the status of their mountain areas and efforts to carry out sustainable development activities.

[5] In this connection, it should be noted that the year 2002 has also been declared the International Year of Ecotourism (see General Assembly resolution 53/200).